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REPORT

of the

DEPARTMENT OF DEFENCE PRODUCTION

January 1 to December 31, 1960

OTTAWA

105-04278/

TENTH REPORT

of the

DEPARTMENT

of

DEFENCE

PRODUCTION

1960

Honourable RAYMOND O'HURLEY, *Minister*

D. A. GOLDEN, *Deputy Minister*

93207-9—1

ROGER DUHAMEL, F.R.S.C.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1961

Price 35 cents Cat. No. P1-4/1960

To His Excellency Major General Georges P. Vanier, DSO, MC, CD,
Governor-General and Commander-in-Chief of Canada.

MARCH 3, 1961.

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit to Your Excellency the Report of the Department of Defence Production for the calendar year 1960.

A summary of the operations and services rendered by this Department, under their respective headings, is laid before Your Excellency.

Respectfully submitted,

Raymond O'Hurley.

Minister of Defence Production.

93207-9—1½

MARCH 2, 1961.

The Honourable Raymond O'Hurley, P.C., M.P.,
Minister of Defence Production,
Ottawa, Ontario.

DEAR SIR:

I have the honour to submit the Report of the Department of Defence Production, which covers the operations and services rendered during the calendar year 1960.

Yours faithfully,

Deputy Minister.

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Introduction

UNDER the provisions of the Defence Production Act (R.S.C. 1952, Chapter 62, as amended), the Department of Defence Production has exclusive authority to procure the goods and services required by the Department of National Defence and the responsibility to ensure that the necessary production capacity and materials are available to support the defence production programme.

The Department also serves as procurement agent for the Canadian Commercial Corporation, a Crown company primarily responsible for the purchase in Canada of defence goods required by other governments and of supplies needed to meet Canadian commitments under the Colombo Plan and other international agreements.

Military construction is the prime responsibility of Defence Construction (1951) Limited, a Crown company reporting to Parliament through the Minister of Defence Production.

In 1960, an Emergency Supply Planning Branch was established within the Department to carry out the task of planning and making other necessary arrangements to provide for the immediate establishment of a War Supplies Agency should there be a nuclear attack.

The Ammunition and Gun Branches were combined into an Armament Branch, in line with the Department's continued interest in adapting its organization to changes in the pattern of defence equipment requirements.

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Production and Procurement

PROCUREMENT and construction activity for the Canadian defence programme, as measured in terms of payments to contractors, declined in 1960 for the seventh consecutive year. At $620.6 million, expenditures were 7.8 per cent lower than in 1959. On the other hand, commitments to business and industry, as reflected by the net value of contracts issued, were much greater in 1960. The value of new contracts and increasing amendments to existing contracts, less decreases and cancellations, amounted to $805.9 million, 36 per cent more than in the preceding year. For the first year since 1954 the volume of new commitments exceeded the value of expenditures, thus increasing the amount of outstanding defence business during the year by $185 million.

Canadian defence expenditures made to prime contractors located outside the country represented 9.5 per cent of total cash payments during the year. This was an increase over the 6.7 per cent paid abroad in 1959. As usual, the greatest value of payments abroad, $58.7 million, went to the United States. However, United States Government spending on prime contracts placed in Canada, which totalled $85.5 million in 1960, was much higher than Canadian prime defence spending in the United States. As in past Reports of the Department, these figures reflect only expenditures to prime contractors of this Department and Defence Construction (1951) Limited, and do not represent the total flow of Canadian defence expenditures into the United States nor of United States defence expenditures into Canada.

Details of the production and procurement programmes, an analysis of the contracts issued and expenditures made, and a report on the production sharing programme are given in the following pages. An account of the defence construction programme is contained in the Annual Report of Defence Construction (1951) Limited.

Aircraft

Aircraft and aircraft equipment requirements of the Department of National Defence amounted to $252 million in 1960, which was approximately the same level as 1959. About 30% of this was for repair and overhaul and 70% was for development, procurement and production of aircraft and related systems.

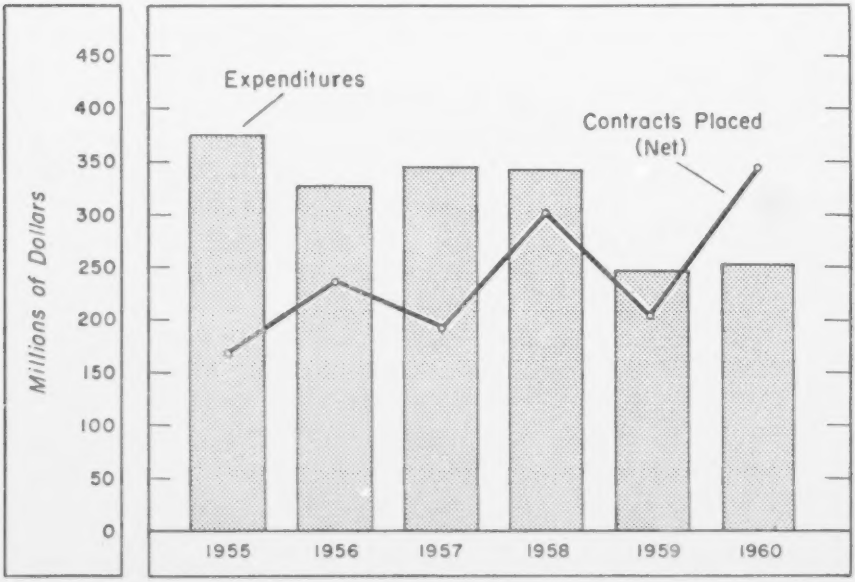
Deliveries of the CP-107 Argus maritime reconnaissance aircraft and the CS2F Tracker carrier-borne aircraft were completed in 1960. Deliveries of the CC-109 medium range transport were virtually completed. Four Caribou aircraft,

purchased for use and support of the United Nations activities, were ordered and delivered in the latter part of the year.

The CC-106 long-range transport production programme continued during the year, with the first aircraft being delivered to the Royal Canadian Air Force in November. Deliveries of these aircraft were set back a few months owing to difficulties encountered with engine deliveries. These difficulties were cleared up by the end of the year.

The first of a small quantity of Albatross search and rescue aircraft ordered from the United States was delivered. In addition, four C-130B Hercules medium range heavy bulk carrier aircraft were also purchased in the United States. These aircraft were not manufactured in Canada because the small quantity did not permit economic production in this country.

Contracts and Expenditures for the Defence Aircraft Programme



During the year, the CF-104 production programme became the major programme within the Canadian aircraft industry. The production of the airframe, engines and equipment items for the programme proceeded on schedule and the first aircraft is expected to be off the assembly line in the Spring of 1961. The similarity between the Canadian version of the F-104 aircraft and that adopted by several NATO countries has lent itself to close co-operation between the countries concerned. An officer of the Department was transferred to Europe as a representative to the European Organization for Direction and Control of the F-104G programme.

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Production of the Otter aircraft for the RCAF continued through 1960.

In the field of engine production, the R-1820-82 piston engine was completed during the year, as was the Hamilton Standard propeller. Both these items of equipment have been installed on the CS2F Tracker aircraft. Production of the J-79-7 turbojet engine for use in the CF-104 was on schedule and the first engine successfully completed its test run in December.

There was considerable activity during the year in aircraft equipment items. Production of the position and homing indicator was entered into for the CF-104 programme and has been selected by the German Air Force, the Royal Netherlands Air Force, the Belgian Air Force and the Italian Air Force for use in their F-104 aircraft. The LN-3 inertial navigation system, the MH-97 automatic flight control system and other items of navigation equipment for the CF-104 were also put into production. Further quantities of the air navigation and tactical control (ANTAC) system were ordered for the Neptune anti-submarine aircraft.

Repair and overhaul of airframes, engines and other aircraft equipment proceeded at a lower level than in previous years, primarily because of the withdrawal of a number of types of aircraft that had become obsolete. Considerable progress again was made in improving contracting methods with respect to repair and overhaul programmes.

Procurement of the Mk. 1 Caribou on behalf of the United States Army was continued during the year and firm contracts were placed for a number of aircraft. The performance of this aircraft during flight trials and subsequent demonstrations has attracted world-wide interest. A development programme on the Mk. 2 Caribou aircraft was started in co-operation with the manufacturer.

The Department gave financial support to the PT-6 gas turbine engine, which is being developed by a Canadian company.

The Aircraft Branch was active in the Canada-United States development and production sharing programme. Arrangements were made, wherever possible, to increase the number and type of opportunities for firms in the Canadian aircraft industry to bid competitively on United States defence work. Significant progress was achieved in both the prime contract and subcontract areas. Intensive efforts were made to locate and identify in the Canadian aircraft industry projects with potential use for the United States military services. In a number of such cases, government financial assistance was provided to maintain scientific and technical ability at a level capable of participating in future joint production programmes with the United States.

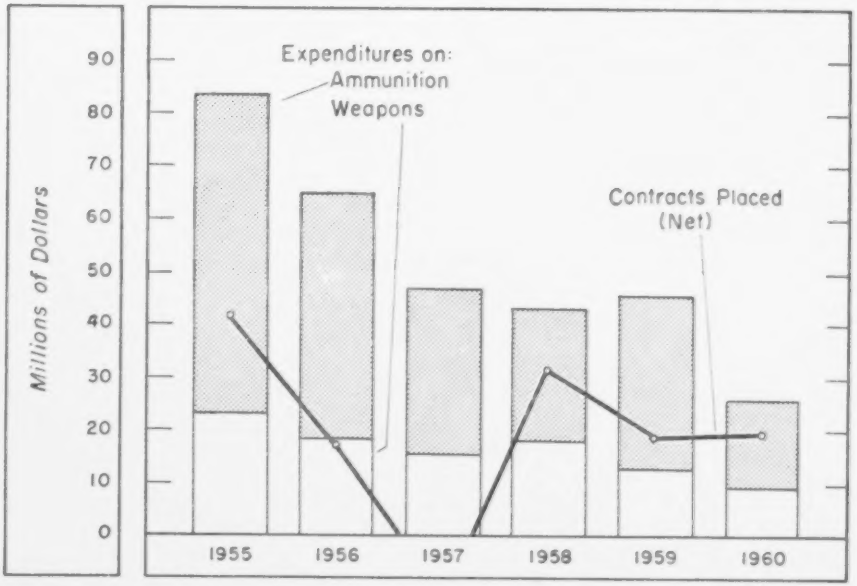
Armament

The procurement of ammunition and of weapons had, until October 1, 1960, been performed by the Ammunition and Gun Branches of the Department. On that date these areas of procurement were combined and became the responsibility of a new Armament Branch.

Production of anti-submarine mortars, 2.75" rockets and 3"/50 calibre illuminating cartridges was completed during the year. Among the major items under production were anti-submarine torpedoes for export to the Royal Navy; 7.62mm rifles and 9mm submachine guns and ammunition; 20 pdr., 105mm howitzer, and 81mm mortar smoke ammunition for the Army; 3"/50 calibre, 3"/70 calibre and 4" naval gun ammunition; practice depth charges and bombs; high altitude rockets; and many types of pyrotechnic devices for the three Armed Services.

Major development projects included navigational and arming aids, underwater explosive signals, new type anti-submarine projectiles, plastic components, a new type propellant and pyrotechnic devices.

Contracts and Expenditures for the Defence Armament Programme



Procurement of armament items from abroad increased as a result of smaller requirements for the Armed Forces. Items were only purchased outside Canada, however, where production in this country would have involved the establishment of special facilities at an unduly high cost. The principal purchases in the United States were for 762mm Honest John rocket equipment and JATO (jet assisted take off) rockets. Purchases in the United Kingdom included 3"/70 calibre guns and mountings, 105mm tank ammunition, star shells and flares, safety aircraft ejection equipment, and special armour plate.

Efforts to promote foreign interest in Canadian armament production and development increased substantially during the year, with a corresponding increase

in opportunities for Canadian contractors to bid on the military requirements of other countries. Arrangements were made for co-operation by the United States in several Canadian development programmes. Through conferences of the North Atlantic Treaty Organization, certain Canadian-designed products were brought to the attention of member countries.

Various specialized production facilities were maintained in a state of partial readiness for future use. A contract was issued for joint Canadian-United States financing of the maintenance of the nitroguanidine production facility located in this country.

Electronics

Canadian defence requirements for electronics and communication equipment involved the expenditure of $88 million in 1960, down from $100 million in the preceding year. New commitments, however, increased significantly to $133.6 million from $82.3 million in 1959. In addition to expenditures on Canadian defence electronics requirements, about $38 million was spent in Canada by the United States for electronics supplies during the year, and a beginning was made on production for the United Kingdom and the Federal Republic of Germany.

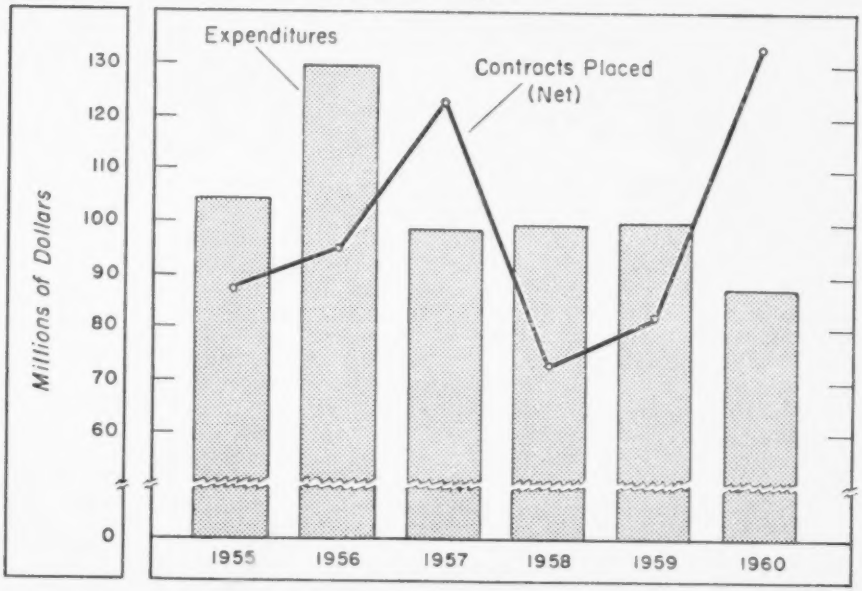
In the field of radar, the production of search and height finding radars and of fiberglass radomes neared completion. These items were being produced to meet the requirements of both the Royal Canadian Air Force and the United States Air Force. Production continued on counter countermeasure equipment for both these Services, and on selective identification equipment. The development and production of data processing equipment was a significant contribution to the air defence radar programme. Production commenced on battlefield surveillance radars for the Armies of both Canada and the United States.

Production on two major search and attack sonar programmes continued during the year, as well as on the Canadian designed variable depth sonar. Additional production on the variable depth sonar was initiated to meet requirements of the Royal Navy. A miscellany of naval navigation equipment, such as gyro compasses, logging equipment and plotting tables, was produced. Sonobuoy development and production was continued for the Royal Canadian Air Force and the United States Navy.

Production and installation continued on air defence communication (ADCOM) for the Royal Canadian Air Force. Planning for semi-automatic ground environment (SAGE) communications in Canada continued, and initial contracts were placed for the lease of long line and on-base systems. Rearward communications for the Ballistic Missile Early Warning System (BMEWS) were completed during the year. Production in the United Kingdom for Canadian Army

vehicle communications continued, and contracting for three major Army communication projects was begun. Production also continued on the communication requirements in Canada of the United States Army. Procurement was initiated for the radio transmitting and receiving equipment for new naval ships.

Contracts and Expenditures for the Defence Electronics and Communication Equipment Programme



A major programme in the area of aircraft electronics was the production of the NASARR system of fire control and terrain avoidance for the CF-104 aircraft. Communication, navigation and identification equipment for several major new programmes and retrofit programmes continued in production. Considerable development work took place on airborne anti-submarine electronics, including a sonobuoy receiver retrofit programme.

Activity in the training aids (simulator) field continued at a high level. Development of an Argus tactical crew procedure trainer neared completion, and programmes were completed in connection with the Argus operational flight trainer and general purpose flight and instrument trainers. A major programme was undertaken for the supply of CF-104 operational flight and tactics trainers, including requirements for the Federal Republic of Germany, the Netherlands and Belgium. A requirement for a tactical trainer for the Royal Canadian Navy was met, and work began on a models control trainer for that Service. The Department continued its administration of an automatic letter sorter programme for the Post Office Department.

Considerable activity was devoted to the operation and maintenance of the mid-Canada early warning line.

Installation of new radar, data processing, communication, navigation and identification equipment, largely for the United States military services, required substantial effort during the year.

The procurement of component spares for both the Canadian and United States Services continued at a significant level. The Department's programme to establish qualified sources of supply for component parts and materials progressed satisfactorily, with 20 contracts having been placed with Canadian firms. Seven additional projects were under negotiation at the end of the year.

The encouraging increase in electronics procurement in Canada by the United States and other countries of the North Atlantic Treaty Organization was assisted by the maintenance of a small group in the Electronics Branch directed towards identifying and following-up defence requirements in certain areas where this country has a production capability.

Shipbuilding

Construction of all six vessels of the third group of destroyer escorts, known as the repeat-Restigouche class, continued through the year. The last two vessels of this group will represent an improved version of the repeat-Restigouche class. It is planned that this improvement will include a helicopter flight deck with hangar and will be fitted with variable depth sonar equipment. The majority of the components for these vessels were purchased and manufactured in Canada.

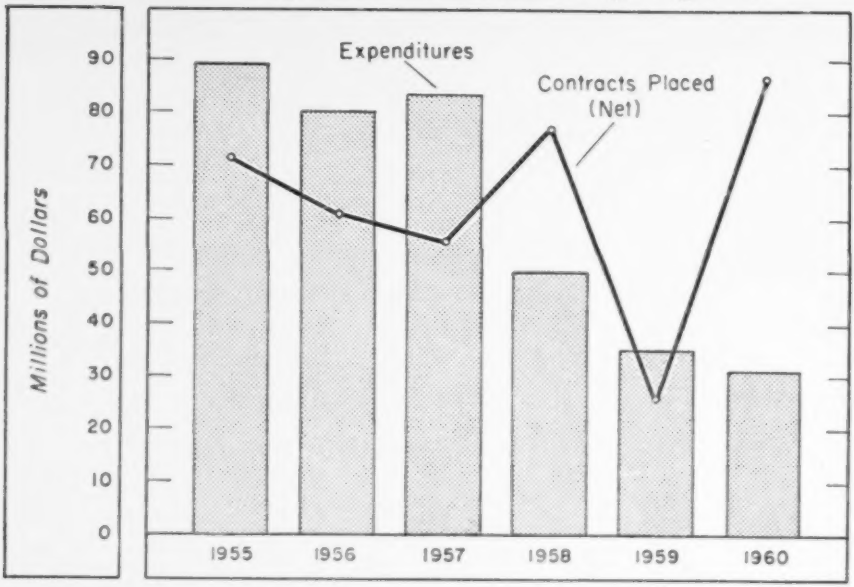
The central procurement agency located at the lead yard maintained its operations under the supervision of this Department. This procurement agency is responsible for the bulk purchase, distribution and accounting associated with the supply of equipment and material required to be worked into the vessels of the repeat-Restigouche class, and which had been the responsibility of the lead yard during previous destroyer escort programmes.

A contract was placed on a normal commercial basis for the construction of a naval tanker-supply vessel. This is the first time that a contract of this nature has been negotiated for a large and complex Canadian naval vessel. Materials, components and equipment for this vessel were procured from Canadian sources wherever possible, subject to availability and reasonable competition.

A contract was also issued, as a result of competitive tenders, for the construction of a hydrographic and oceanographic survey vessel for the Department of Mines and Technical Surveys.

Contracts for a standard diving tender and a tank cleaning barge for the Royal Canadian Navy were accelerated as part of the government's winter works programme.

Contracts and Expenditures for the Defence Ships Programme



Programmes of small boats were completed during the year.

Seventy-five contracts valued at $8.6 million were placed during the year for the repair and refit of naval ships. Six contracts were issued for the installation and repair of degaussing equipment. These contracts have been widely distributed throughout the shipbuilding industry.

Modernization programmes were authorized for the St. Laurent class destroyer escorts as well as HMCS CRUSADER. The naval central drawing office, which is under contract from this Department, is preparing drawings for these programmes as well as drawings required for the construction of two deperming dumb barges.

Negotiations have been proceeding for the establishment in Canada of production facilities for the manufacture of noise reducing five-bladed propellers for naval ships.

Studies were conducted in conjunction with two other government departments and the steel industry on the requirements for defence and commercial purposes of steel manufactured by the vacuum degassing process. This process produces steel of a very pure quality with a minimum of brittleness.

Machine Tools and Gauges

Machine tools valued at $706,000 were procured in 1960, down noticeably from the $1 million worth purchased in the preceding year. These machine tools were primarily for the Department of National Defence and the Colombo Plan.

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Except for a few major specialized machines required in the Naval dockyards, most purchases were for standard types of maintenance and repair shop equipment.

The care, maintenance and custody of stand-by Crown owned defence assets, including the allocation and reallocation of machine tools, involved contracts totalling $562,000. The 155mm shell forging and machining facility, which was in storage in a contractor's plant, was moved to the Department's machine and tool warehouse. The 20 pdr. shell facility was combined with other equipment required for forging and machining 20 pdr. and 90mm shells and placed in long-term storage. Following the completion of production on M500 series fuses and 2.75" rockets, these facilities were removed and stored.

Gauges valued at $61,000 were purchased for the Inspection Services of the Department of National Defence. This was slightly less than the value of gauges bought in 1959.

Machine Tool Branch inspection and technical personnel continued to be called upon by other branches of the Department for plant surveys, time study reports and other technical assistance involving machine tools and production facilities.

General Purchasing

The General Purchasing Branch, through its headquarters organization and fourteen district offices located across Canada, procured the requirements of the Department of National Defence and other requisitioning agencies involving goods and services not normally requiring special production facilities. These purchasing activities resulted in the issuance of 145,800 contractual documents having a total value of $179.3 million in 1960.

Purchases by the headquarters organization included bulk requirements of such items as petroleum products and hard carbon fuels, clothing and footwear, medical and dental stores, electrical power generating, control and distribution equipment, beverages and packaged foods, building supplies and hardware, furniture and furnishings, barrack equipment and naval stores, as well as aircraft ground handling equipment and all types of mechanical transport, construction and road maintenance equipment. Services arranged by headquarters included certain research and development projects, engineering, food catering, and aerial surveys. Research projects included the investigation of indigenous tanning materials for the production of leather, ways to combat ice on fixed structures and airport runways, and the bearing strength of ice sheets. Canadian industry, together with certain Crown agencies, participated with encouraging results in the development of essential equipment in the nuclear, bacteriological and chemical fields.

During the year the Branch arranged contracts for the Canadian fabrication and testing of freeze dry equipment for dehydrating meats and vegetables. Although other countries have used the same concept for the preservation of food, the Canadian unit has been expressly designed to process items, common to our diet, at a higher rate than has been achieved elsewhere. A master prototype of the "Bobcat", in the form of an armoured personnel carrier, was delivered toward the end of the year. Following evaluation trials, it was determined by the Department of National Defence that a product improvement and pilot production programme would be necessary before the vehicle could be manufactured in quantity.

Contracts awarded during the year for aerial surveys utilized the full facilities of all Canadian firms engaged in this work. The requirements ranged from topography studies of the Northwest Territories to aerial mapping of densely populated areas for use by civil defence co-ordinating groups. A substantial volume of aerial photography equipment and supplies was procured on behalf of the Royal Canadian Air Force in support of their aerial survey programme. Purchases by the Branch in connection with the CF-104 aircraft programme consisted principally of ground starting and electrical power sets, generator frequency converters, personnel parachutes, pressurized clothing to overcome the force of gravity, helmets, visors and barometric parachute releases. Repair and overhaul contracting for cameras, fire fighting equipment, aircraft ground handling equipment and parachutes continued at a high level.

Initial steps were taken to establish a Canadian qualified products list for paints and related commodities. Preliminary arrangements were also made to introduce a similar qualified listing for industrial chemicals, cleaning materials and paper products. Interested suppliers can apply for approval of a specific product under this arrangement which, if granted, indicates compliance with a government specification.

The Branch continued to purchase a wide range of emergency health and welfare and national survival requirements for the Army. These included packboards, hoists, tackle blocks, pumps, pharmaceuticals, drugs, various types of medical equipment, x-ray machines, dental stores, blood and intravenous solutions.

Through its fourteen district purchasing offices the Branch continued to contract for services from local contractors and purchase fresh food and supplies needed for immediate use by regional military units and establishments. The activities of these offices accounted for 134,500 of the contractual documents issued by the Branch and involved commitments valued at $59.3 million. Several offices were called upon to procure urgent and unusual requirements for the

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movement of the Canadian task force assigned to the United Nations in the Congo. All offices actively participated in the procurement of materials required for the winter works programme. The continued implementation of better buying and office practices improved the operating efficiency of these offices.

District purchasing agents attended sessions with the Emergency Measures Organization to study the role envisaged for the district offices in the event of a national emergency.

Contracts and Expenditures

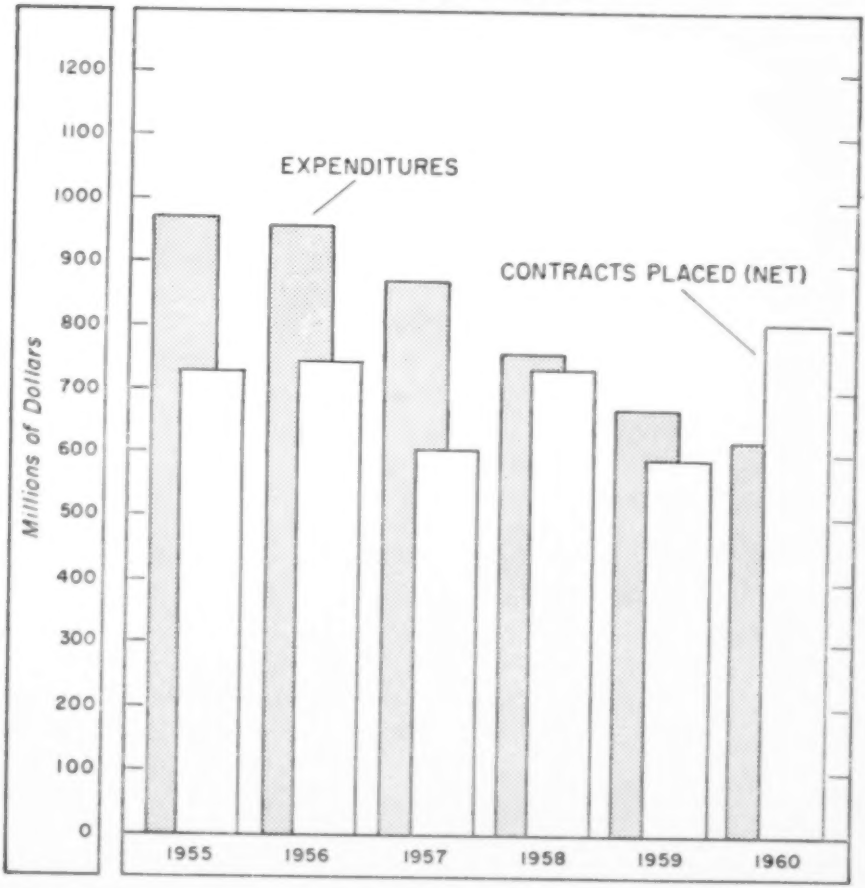
Defence procurement and construction contracts placed for the Department of National Defence amounted to a net value of $805.9 million in 1960. This was a 36 per cent increase over the value for 1959. (The net value of contracts placed takes account of the value of amendments which increased or decreased existing contracts as well as the value of new contracts issued.) The significant increase in the net value of contracts issued resulted primarily from rises of $141.3 million in the aircraft programme, $60.3 million in the ships programme and $51.3 million in the electronics and communication equipment programme. The $805.9 million net value of contracts placed in 1960 was made up of $715.4 million in new contracts, $175.3 million in amendments that increased existing commitments, less $84.8 million in amendments that decreased existing contracts.

Contracts and amendments issued for the aircraft programme had a net value of $343.9 million in 1960, more than two-thirds greater than in 1959. This programme accounted for 42.7 per cent of the total net value of contracts placed in 1960, compared with 34.3 per cent in the preceding year. The major new contract commitments were for the CF-104 aircraft, its J-79-7 engines and CF-104D trainers. Contracts were issued for the purchase of four C-130B Hercules transport aircraft and related equipment; and increased commitments were made in connection with the CC-106 long range carrier. Contracts having a total net value of $133.6 million were placed for the electronics and communication equipment programme in 1960, which represented a 62.3 per cent increase over 1959. Major items of this programme included the LN-2 navigation system, air data computers, and other electronic equipment for the CF-104 aircraft. The larger commitments involved in the $86.2 million worth of contracts placed in the ships programme were for the repeat-Restigouche class destroyer escorts. A naval tanker-supply vessel was also contracted for during the year. Defence construction contracts, totalling $51.6 million in 1960, were 23.2 per cent down from 1959.

Expenditures on Canadian defence procurement and construction amounted to $620.6 million in 1960, 7.8 per cent less than in 1959. All the major equipment programmes except aircraft (which increased by $6 million) registered

declines. Ammunition and explosives expenditures decreased $16.3 million and electronics and communication equipment fell off $12.1 million. The $16.5 million decline on clothing and equipage was mainly due to the unusually large expenditure in 1959 when the Department of National Defence took over the Defence Production stockpile of cloth. Just over 40 per cent of all spending on defence procurement and construction in 1960 was accounted for by the air-

Contracts Placed on Behalf of the Department of National Defence and Expenditures Against Such Contracts



craft programme, compared to 36.5 per cent in 1959. The next major spending programmes were electronics and communication equipment with 14.2 per cent, construction with 10.3 per cent, fuels and lubricants with 6.3 per cent, and ships with 5.0 per cent.

In 1960, 10.6 per cent of the total net value of prime contracts issued was placed abroad, as compared to 8.0 per cent in 1959. The United States received 8.7 per cent of the total, the United Kingdom received 1.5 per cent and other countries 0.4 per cent. The proportion of expenditures paid directly to defence contractors located outside Canada was 11.3 per cent of total payments on defence procurement and construction, 9.5 per cent going to the United States, 1.4 per cent to the United Kingdom and 0.5 per cent to other countries. The corresponding proportion of payments made abroad in 1959 was 6.7 per cent.

The United States received Canadian prime defence contracts valued at $70.4 million in 1960. This substantial increase over the $30.2 million in contracts placed in that country in 1959 was primarily accounted for by the purchase of CF-104D trainer aircraft, the LN-2 navigation system, and a small quantity of C-130B aircraft with associated spares and equipment. Payments to prime contractors in the United States amounted to $58.7 million in 1960, as against $31.3 million in the previous year.

Contracts placed in the United Kingdom were valued at $11.7 million in 1960, down from $14.4 million in 1959. The major new defence commitments in the United Kingdom were for 105mm shells and modification kits to up-gun Centurion tanks. Additional contracts were placed for the repair and overhaul of aircraft used by the Air Division in Europe. Total payments to United Kingdom prime contractors amounted to $8.6 million in 1960, a decline of 20.6 per cent from the preceding year.

United States Government defence prime contracts placed in Canada by this Department and Defence Construction (1951) Limited amounted to $75.4 million, approximately the same as in 1959. The major United States purchases in this country were for Caribou aircraft, spares for aircraft engines, sonobuoys, petroleum products, re-supply support for early warning stations, rental of voice circuits and data facilities, depot level maintenance for electronic communication equipment, and maintenance and operation of a long lines communication system. Payments made by the United States Government on account of prime defence contracts placed in Canada amounted to $85.5 million in 1960, an increase of 16.6 per cent over 1959.

The figures above for Canadian defence purchases in the United States and the United Kingdom, and United States Government purchases in Canada, refer only to prime defence contracts. They do not reflect the indirect effects of sub-contracting or the purchases of components, materials or services by the prime contractors.

In addition to the defence contracts described above, the Department placed orders valued at $25.7 million in 1960 for other Canadian Government depart-

ments and agencies and for governments other than the United States. These purchases included items such as fertilizer and diesel locomotives for Canada's contribution to the Colombo Plan, flight simulators for the Federal Republic of Germany, variable depth sonar for the United Kingdom, a hydrographic and oceanographic survey vessel for the Department of Mines and Technical Surveys, and flour for the Department of External Affairs.

A statistical summary of defence contracts placed by the Department of Defence Production and Defence Construction (1951) Limited, and of expenditures against these contracts, is given in Appendix F of this Report.

Defence Production and Development Sharing

During 1960, the Department's activities in connection with the Canada-United States defence production and development sharing programme were substantially increased, and the results were encouraging. A definite climate favourable to the participation of Canadian industry in United States defence procurement was created, there was an expansion and consolidation of the gains made in 1959 in overcoming procedural difficulties, and the development aspect of the programme was increased. The value of United States prime contracts and subcontracts received by Canadian industry that were related to the production sharing programme amounted to $112.7 million in 1960 as compared with $96.3 million in the preceding year.

Several committees and co-ordinating organizations were concerned with the programme. The Canada-United States Ministerial Committee on Joint Defence reviewed periodically the political and economic aspects of joint defence problems, including production and development sharing. The Permanent Joint Board on Defence similarly followed and supported the programme. A Committee of senior officials of both governments met regularly to provide direction to and monitor the progress of the development and production sharing programme. This Committee included representatives from the Canadian Departments of Defence Production, National Defence, External Affairs and Finance, as well as from the United States Army, Navy, Air Force and the Office of the Secretary of Defense. An Interdepartmental Committee, made up of representatives of the Departments of Defence Production and National Defence, the Defence Research Board and Treasury Board staff, co-ordinated the development sharing projects supported by this Department's development fund.

The Department's Production Sharing Co-ordinating Office maintained close liaison with other Canadian Government departments and with a similar co-ordinating group in the United States Government. The number of officers directly associated with production and development sharing in Ottawa was increased, thus permitting the establishment of production sharing sections in four of the production branches. This resulted in improved co-ordination and liaison with industry. The Department's Washington Office was also active in the programme, and five liaison officers were stationed at key government procurement offices and large contracting centers in the United States.

During 1960, negotiations continued toward liberalization and expansion of previous Canada-United States arrangements designed to encourage joint production sharing. Thus, regulatory and procedural restrictions, such as the Buy American Act and duty regulations, which prevented Canadian firms from obtaining equal access to United States defence markets, were virtually eliminated with

regard to Canadian defence supplies. Other problems, such as security, were not completely eliminated but their effects on Canadian suppliers were mitigated.

The lessening of these problems did much to establish the right climate for production sharing. Of equal importance, however, was the intensive stimulation and educational campaign carried out in both countries. The United States Department of Defense and the American Services distributed directives and regulations designed to encourage purchasing from Canada both on the prime contract and subcontract level. Representatives of many United States companies visited Canadian firms to make facility surveys and determine sources for subcontracting requirements.

The Department of Defence Production continued its extensive campaign to complete the listing of Canadian companies as sources for United States Government requirements. A continuous review and revision of these listings was carried out to ensure that the information on Canadian capabilities was current and accurate. Departmental officers, through visits to United States procurement centers and through United States and Canadian industry, trade associations, trade fairs and symposia, were able to obtain information and provide useful guidance to participants in the programme.

The Department provided information on the programme to Canadian and United States prime contractors and subcontractors and to the United States Services. Of particular importance was the revised booklet on "Canada-United States Defence Production Sharing", which is now widely used in both countries. Other booklets distributed to Canadian industry outlined procedures used by the United States Services in regard to research and development purchasing, as well as instructions for obtaining technical information and planning documents. In addition, United States buyers were provided with brochures listing Canadian defence companies, and the defence commodities and research and development areas in which Canadian companies have special competence.

The success of these efforts is shown by the significant increase in bid solicitations and submissions in both the prime contract and subcontract areas during 1960. In the subcontracting area, which was virtually non-existent prior to the establishment of the production sharing programme in the fall of 1958, invitations to bid rose from some 1,900 in 1959 to more than 2,700 in 1960, and replies to these bids rose from approximately 1,400 to more than 2,100. United States subcontracts received by Canadian firms numbered 882 with a value of $51.7 million, as compared with 365 valued at $45.3 million in 1959.

The Department provided further financial assistance to Canadian firms, primarily in the electronics and aircraft fields, by absorbing part of the Canadian contractors' preproduction and tooling costs, thus putting them in a more equitable

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competitive position with United States contractors. Normally, American contractors have an advantage because most of their preproduction and tooling costs have been written off under previous contracts. Payments amounting to $630,000 were made to Canadian firms in 1960 for this type of assistance, and new commitments made totalled $307,000.

Increasing emphasis was placed on the research and development aspect of production sharing in 1960. This involved the continuation of financial support for a long-term defence development programme aimed at maintaining and improving Canadian industry's scientific and technical competence so that it will be able to participate fully in future United States defence production programmes. This support took several complementary approaches to defence development in the United States. The Department ratified procedural arrangements with the United States Army and continued negotiations with the United States Air Force with the result that certain United States development requirements will be undertaken and financed in Canada. In support of uniquely Canadian projects whose successful development is expected to be of interest to the United States Services, the Department provided assistance to competent Canadian companies. Further, to improve Canadian industry's position to compete for United States financed development requirements, the Department shared the cost of selected projects with the United States Government and the Canadian companies concerned.

Contracts valued at $2,425,000 were issued in 1960 for this research and development assistance, with payments amounting to $2,033,000. In addition to these contracts, there were a number of projects under active consideration, including several unique Canadian concepts and formal United States requirements approved in principle for support, totalling $12 million. Canadian companies received almost $3 million in United States defence research and development business during the year. The development projects were in such areas as navigational aids, communication equipment, anti-submarine warfare equipment, gas turbine engines, and vertical and short take off and landing (VTOL and STOL) aircraft.

The achievements of the production and development sharing programme during 1960 resulted from close co-operation between government and industry in Canada and the United States. Both governments have recognized the need to continue to stimulate and educate industry and government personnel if the full benefits of the programme are to be attained.

Canadian Co-operation in NATO on Research, Development and Production

THE Department was given the responsibility of co-ordinating Canada's activities in connection with the efforts of the North Atlantic Treaty Organization to increase co-operation in research, development and production in order to attain maximum efficiency in standardization and production by member countries. The Department is represented on the NATO Armaments Committee, which has selected a number of projects to be studied for this purpose.

Close co-operation has been maintained between this Department and the Department of National Defence and other government agencies in this field. Canada has submitted a number of projects for consideration by the NATO groups, including the Caribou aircraft, a counter mortar radar, a land vehicle navigation set and variable depth sonar equipment.

This Department, the Department of National Defence and the National Research Council provided representation at meetings to review most of the projects, and provided necessary information on the Canadian proposals. In addition, representation was provided at meetings of existing groups of experts.

Arising out of these increased activities within NATO, several countries have expressed directly their interest in Canadian equipment, such as the counter mortar radar and the vehicle navigation set. Canadian firms were encouraged to become potential suppliers of military equipment to European countries.

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Industry and Defence

PROCUREMENT and construction activity directly related to the Canadian defence preparedness programme represented just over one and one-half per cent of this country's gross national product in 1960, based on payments to Canadian prime defence contractors. This was a decline from 1.8 per cent in 1959, reflecting, for the year as a whole, the combined effects of reduced activity in some defence programmes and an increase in the non-defence sector of the Canadian economy.

Defence production is an important source of activity in only a few Canadian industries, as civilian demand is the major determinant in most industries in this country. Production and employment in the aircraft industry, which is the largest of the Canadian industries predominantly dependent on defence business, remained fairly stable throughout the year. Employment in the shipbuilding industry was at about the same level in 1960 as in the preceding year. The construction of the repeat-Restigouche class destroyer escorts, although just getting under way on some vessels, contributed to this maintenance of activity in the industry. The support given to the electronics and armament industries by defence production requirements declined in 1960. Defence construction activity was off only slightly from the preceding year.

The maintenance of an adequate defence production base in Canada has been assisted by the defence production and development sharing programme, with its emphasis on providing a greater degree of joint utilization of the defence production facilities in Canada and the United States and the need for Canadian industry to maintain a high standard of engineering and technical competence for development purposes. The assistance given to Canadian industry and the success achieved in this programme in 1960 are covered elsewhere in this Report. In a number of areas, Canadian industry's research and development capabilities produced new requirements for the military Services, some of which are also mentioned in preceding sections of this Report.

The Department continued its programme to establish sources in Canada for electronic component parts and materials essential to the production of modern military electronics. The object of this is to establish qualified sources of supply sufficiently in advance of requests from the Department of National Defence in order to ensure the maximum participation of Canadian firms in defence procurement, particularly in the electronics field. Because of the urgent nature of many military requirements, this advance qualification will make Canadian producers less dependent on United States and other sources of supply. A further aim is to prove the capability of producing a requirement at a highly competitive price as well as to required performance standards, thus enabling

Canadian sources to meet both United States and Canadian demand. Contracts valued at $512,000 were issued in 1960 to provide for the establishment or extension of qualified sources for the production of certain types of capacitors, resistors, potentiometers, tachogenerators and miniature blowers, for the development and evaluation of high performance electronic components, and for the establishment of a ceramic manufacturing facility.

The Department continued to encourage private industry to make its own investment in the capital equipment required for defence production. In this way, defence production capacity would be more directly tied in with the general structure of Canadian industry. In some cases, however, direct Government investment and financial incentives were necessary to ensure the capacity essential to defence requirements. Such Government assistance to private industry was small in 1960.

Government financed capital assistance to private industry involved the expenditure of $1,456,000, most of which was for the extension of a runway at the Cartierville, Que., airport. New approvals of capital assistance projects, which amounted to only $248,000 in 1960, involved assets for the production of precision electric ceramics, fixed paper capacitors, military type transistors, as well as a further amount for the Cartierville airport project. Title to all capital assistance assets remains with the Crown, and the contractor responsible for their use is held accountable for their proper maintenance.

Additional capital cost allowance for income tax purposes (accelerated depreciation) was granted to some contractors on capital investment primarily for defence production or production supporting activity. Interim certificates for accelerated depreciation were granted on an estimated $3.3 million worth of capital assets in 1960. These assets were mainly required for the development of a facility for a small gas turbine engine and for an aircraft engine test facility, the production of J-79 jet engines for the CF-104 aircraft, the production of CC-106 and CP-107 aircraft and the production of klystron tubes.

Crown-owned assets were rented to contractors for non-defence work in the interest of further integrating defence production equipment into the civilian sector. At the end of 1960, assets having a purchased value of $17.5 million were authorized for rental by private firms for commercial use. In all cases, the interest of the Crown in the future use of these assets for defence production purposes was protected and the prices charged were such as to ensure a fair return to the Crown on the assets concerned.

Where it was not possible to keep necessary production facilities operating, either within the defence field or through the development of production for civilian markets, the assets were maintained in a state of readiness. Some $570,000 was spent in 1960 on the care, maintenance and custody of standby Crown-

owned defence production facilities and equipment so that they would be available for future use.

Materials Supply

While some difficulties were experienced in obtaining satisfactory deliveries of materials to meet Canadian defence, atomic energy and production sharing programmes, most programmes were effectively kept on schedule with departmental assistance where required. Canada continued to depend on allocations under the United States Defense Materials System to satisfy the needs of defence and related programmes for those materials which are not available in this country. Planned expansions of facilities and new mills went forward without any interruption, and these will when completed substantially relieve Canada's dependence on foreign sources of supply. Ferrous and non-ferrous material production, with the exception of nickel, was gradually cut back by 10 to 25% of capacity.

The expansion of United States Government facilities for producing helium resulted in ample supplies being available to meet increased demands for defence and atomic energy programmes. Continuing search for sources of helium in Canada was maintained throughout the year, but there was no indication of any developments which could be brought into production economically. The expansion of nickel producing facilities and the development of new properties continued throughout the year. The increased yield from these activities placed Canada in a favourable condition to provide the deficit created by the closing of Cuban properties. Market demands for silver far exceeded production; this attracted attention to the existing world shortage and provided new strength to the price of silver.

The Department's production sharing programme increased production of the sole supplier of magnesium in Canada to the extent that production schedules were maintained at full capacity throughout the year.

The United States Defense Production Act was extended for a further two years. Although numerous amendments have been made since the Act was first passed in 1950, it continues to provide priorities and allocations for Canadian defence orders. Revisions in the United States Defense Materials System required a broader priority identification for Canadian defence and atomic energy programme purchases. Although our participation in the United States system does not impose the necessity of using all facets of the priority procedure, many Canadian defence contractors found it advisable to take full advantage of the special assistance available to them. These contractors generally obtained excellent results from the use of these priorities, particularly for higher technical materials in the electronic field. The United States "Master Urgency List" continued to include Canada's major programmes, thus ensuring equitable distribution of critical strategic components and materials.

Emergency Supply Planning

An Emergency Supply Planning Branch was established in the Department in May, 1960, to be responsible for the planning and other peacetime arrangements necessary to permit a War Supplies Agency to be brought into effective existence immediately should a nuclear attack be made on this country. The Branch is strictly a planning body with no operating responsibilities.

Since the inception of the Branch, planning priority has been given to the development of an interim plan to meet the immediate basic supply needs of the country during the first few weeks after a nuclear attack. This interim plan has three major objectives: first, the development of an organizational framework for the War Supplies Agency and selection on a stand-by basis of suitable persons to staff it; second, the collection as rapidly as possible of inventory data on major stocks of food, fuel, and essential survival materials, and tabulation of these data in a form suitable for post-attack damage analysis purposes; and third, the preparation in draft form of the legal instruments necessary to permit effective control and use of commodities and production facilities available after a nuclear attack. Good progress has been made towards achieving each of these objectives.

The War Supplies Agency, when brought into existence at the outbreak of a nuclear war, would be charged with full responsibility for all aspects of control over the production, distribution and pricing of supplies, both civil and military, other than production on the farm and the catching and landing of fish. Responsibility for farm production and fishing activities would remain with the Departments of Agriculture and Fisheries respectively.

The specific functions of the War Supplies Agency are envisaged tentatively to be the following: post-attack assessment of surviving resources, to determine the availability of food, fuel, ready-to-use survival materials and so forth; assessment of supply requirements, based on claims submitted by other components of emergency government; comparison of supply requirements with availabilities; reconciliation of competing claims; establishment of priorities as required; arrangements for bulk re-distribution of food, fuel, survival materials and other essential commodities; regulation of all internal and external trade to whatever extent commercial activities may remain possible, particularly with respect to rationing, price control, and accommodation; procurement by any means of all goods and services required by government for civil or military purposes; control of industrial production, including the allocation of raw and semi-processed materials; determination of general questions of policy with respect to the production and distribution of supplies under nuclear war conditions.

In conformity with the arrangements being made through the Emergency Measures Organization for a decentralized system of emergency government, the War Supplies Agency would have central, regional, zonal and local elements. The staff would be a composite one, drawn from a number of federal departments and agencies, from provincial sources, and from non-governmental organizations.

By the end of the year the Emergency Supply Planning Branch had, in addition to its Ottawa staff, regional officers located in Halifax, Toronto, Winnipeg, and Victoria responsible for federal emergency supply planning in the Atlantic Provinces, Ontario, the Prairie Provinces and British Columbia respectively. At the end of the year a competition was underway to obtain a regional officer for the Province of Quebec.

Organization and Administration

Two changes in the basic organization of the Department were implemented during 1960. The first took place in May with the establishment of the Emergency Supply Planning Branch to carry out the task, assigned by the Government to the Department, of planning and making other necessary arrangements to permit the immediate creation of a War Supplies Agency in the event of a nuclear attack. A report on the activities of this new Branch in 1960 is contained in the preceding section. The second organizational change took place in October with the formation of the Armament Branch to replace the former Ammunition and Gun Branches. This change was designed to promote efficiency by adapting the departmental organization to the changing pattern of defence equipment needs.

Personnel on strength increased from 1,463 at the end of 1959 to 1,513 at the end of 1960. Of the latter number, 1,199 were located in Ottawa, 252 were employed in offices elsewhere in Canada, and 83 were employed outside the country. The increase in staff during 1960 resulted mainly from additional staff requirements for the Canada-United States defence production sharing programme and for the new Emergency Supply Planning Branch. The Department was also successful in obtaining qualified technical personnel in the aeronautics, electronics and weapons fields through intensive recruiting activity. In addition, the Department recruited cost analysts, estimators, field production officers and district office buyers. Seventy-four competitions were held to fill positions in the Department. There were 279 new appointments, 229 terminations, and 112 inter-branch transfers during the year.

An organization chart of the Department as at December 31, 1960, appears as Appendix A to this Report. The senior personnel at that date are listed in Appendix B, and the distribution of staff by units of the Department is shown in Appendix C.

Five Crown Corporations, whose work is closely allied with that of the Department, continued to report to Parliament through the Minister of Defence Production. A list of these companies and their principal officers is given in Appendix D. An account of the activites of these Crown agencies is contained in their respective Annual Reports.

Production and Purchasing Branches in Canada

During the first nine months of 1960, the procurement of defence supplies requiring specialized production facilities was the function of six production branches: Aircraft, Ammunition, Electronics, Gun, Machine Tool, and Shipbuilding. On October 1st, as mentioned above, the Ammunition and Gun Branches were combined to form the Armament Branch, thus reducing the number of production

branches to five. The General Purchasing Branch continued to be responsible for the supplies and services not normally requiring special production facilities. District purchasing offices in fourteen cities across Canada procured the supplies and services of a local or urgent nature required by defence establishments in the vicinity of the offices. The activities of these production and purchasing branches, including the district purchasing offices, are covered in the Production and Procurement section of this Report. A list of the district purchasing offices in Canada is contained in Appendix E.

Offices Located Outside Canada

The London Office conducted all procurement activity of the Department in the United Kingdom and directed the activity of sub-offices which handled procurement in Continental Europe. This Office procured from United Kingdom Government agencies, such as the Admiralty, the Ministry of Aviation and the War Office, and from a great variety of commercial firms. A small sub-office continued to operate at Prestwick Airport, Scotland, to expedite the repair and overhaul of aircraft and equipment for the Air Division in Europe. Procurement in France, chiefly through the Government of France, was undertaken by a sub-office in Paris; and procurement in the Federal Republic of Germany, chiefly through the Government of that country, was carried out by a sub-office in Koblenz.

The Washington Office continued to handle procurement from the United States Armed Services and, in some exceptional cases, from commercial firms in the United States. Practically all procurement from United States commercial sources was made directly by the appropriate production or purchasing branch in Ottawa. The Washington Office also maintained regular liaison with many United States Government agencies, handled Canadian participation in the United States priorities and expediting systems, and supplied a wide range of information to Canadian Government officials. This Office spent an increasing amount of time in connection with the Department's production and development sharing activities, which are covered elsewhere in this Report. In this connection, it handled a large number of inquiries and arranged numerous meetings involving Canadian and United States Government officials, contractors and subcontractors. The Washington Office directed the activity of a sub-office at Wright-Patterson Air Force Base, Ohio, involving operations with the Air Materiel Command of the United States Air Force.

Production sharing liaison offices were located in New York City and Rome, N.Y., Boston, Mass., and Los Angeles, Calif. A liaison office was also opened in Detroit, Mich., in January 1961.

The Department continued to be represented by two members on the Canadian Delegation to the North Atlantic Council in Paris, France. These

members were responsible for liaison with other national delegations and with the NATO international staff, and for making the Canadian viewpoint known on defence production matters of common concern to several members of the Alliance. They represented Canada on the NATO Armaments Committee which, in turn, controls a wide variety of expert working groups. In addition, they performed a number of duties in committees of the NATO Council engaged in emergency supply planning.

An office was opened in Bonn, Federal Republic of Germany, for the Canadian representative to the European Organization for Direction and Control of the F-104G programme.

The addresses of the Department's offices outside Canada are also shown in Appendix E.

Advisory and Service Branches

The Administration Branch conducted the personnel operations of the Department, provided office equipment and services, maintained a central transcribing pool, and carried out programmes of administrative, personnel and methods improvement.

In addition to the normal activities of the various sections of the Branch, several projects were undertaken which required close co-ordination among them. Increased production sharing requirements and the establishment of the Emergency Supply Planning Branch involved recruiting and orientating personnel, arranging accommodation for regional offices, allocating and laying out space requirements, and selecting and acquiring equipment. The general re-allocation of space at the Department's headquarters location in Ottawa involved planning space requirements, arranging for alterations and moving, and standardizing equipment in some of the production branches.

Appraisal forms for the promotion of secretaries and for some grades of defence production officers were developed by the Personnel Section, and Departmental records required for the group surgical-medical insurance plan were established. The Training and Development Section conducted orientation, contracting, accounting and industrial engineering courses for departmental personnel. A seminar on government buying was conducted for officials of fourteen African nations visiting Ottawa.

The graduate engineer training programme entered its third year with the hiring of six more graduate engineers. The five graduate engineers who joined the Department in the first year of this programme successfully completed their training and were assigned to the production branches.

The Comptroller's Branch provided the accounting service for the Department and for the Canadian Commercial Corporation, a Crown company associated with the Department. Services on behalf of the Corporation included special financial and accounting administration as required. Complete bookkeeping records, based as far as possible on commercial practice, were kept of the transactions against the Department's Parliamentary appropriations and of all assets and liabilities for which responsibility lies with the Minister of Defence Production. These assets include Crown-owned buildings and equipment in custody of private contractors or in warehouses. Their accounting involved physical identification in the field and the maintenance of a full inventory record by description, quantity and value. Test physical counts of materials carried in stock at various locations were also made during the year.

Records were maintained of the transactions arising out of various uncleared accounts taken over from predecessor departments, and with respect to disbursements and deliveries on NATO account which were covered by funds transferred to this Department by the Department of National Defence. The Branch carried out the financial administration of all agreements involving the sale to contractors of Crown-owned land, buildings and equipment, and all net revenues from the rental of Crown-owned factory properties. In addition, the Branch continued to provide the financial administration of the Defence Production Revolving Fund.

The Branch also maintained records of Department of National Defence equipment on loan to contractors through the Department of Defence Production, and contributed to the recording and administration work connected with the rental of Crown assets to contractors.

As in previous years, the Branch submitted monthly statements and reports to the Deputy Minister with respect to the Department. Similar statements and reports, on a quarterly basis, were submitted to the directors and responsible officers of Canadian Commercial Corporation. The Comptroller or his representatives attended various meetings with the Corporation directors and others during the year as required.

The financial position of the Department as at March 31, 1960, is shown in the Balance Sheet and related schedules given in Appendix G, duly certified and reported upon by the Auditor General.

The Economics and Statistics Branch provided the general economic and statistical services required by the Department. It undertook studies in these areas that would provide the Department with information on the effects of the defence procurement programme on various facets of the Canadian economy.

The large quantity of procurement requisitions received by the Department, contracts placed on behalf of the Department of National Defence and other requisitioning agencies, and payments made against these contracts were recorded

and tabulated. The processing of these records, which required the use of mechanical tabulating equipment, provided basic data for analysing the Department's procurement activities and the defence procurement programme. It was also possible to utilize this mechanical equipment for maintaining personnel records in the Department, for assisting the Emergency Supply Planning Branch to obtain regional inventory data, and for providing other branches of the Department with operational statistics.

Projections of defence procurement expenditures were made to provide the Department with an estimate of future procurement activity and to assist the Department of National Defence in the preparation of its budgetary estimates. This required the co-ordination and analysis of expenditure data from major defence contractors and close liaison with production officers.

A study of the effect of defence procurement on the Canadian electronics industry was undertaken, and a survey was made of marine bulk fuel storage facilities. Statistical reports measuring the progress of the Canada-United States defence production sharing programme were prepared regularly during the year. These reports involved periodic surveys of major defence contractors.

The Branch maintained liaison with other economic research and statistical units, both in and outside the Government Service, in order to obtain information necessary for economic appraisals of the defence programme, and to provide them with data on the defence sector of the Canadian economy. Information relating to defence procurement activity was prepared periodically for the North Atlantic Treaty Organization. Various firms and organizations were supplied with material relating to the Department's procurement activities.

Lists of unclassified defence contracts valued at $10,000 and over awarded by the Department to firms in Canada were compiled and issued semi-monthly in the form of a press release.

The Financial Adviser's Branch acted in an advisory capacity with respect to the development and application of financial policies related to defence contracts.

All contract proposals involving commitments in excess of $10,000 were reviewed to ensure that the principal terms conform to departmental policies and that the procurement proposed properly reflects the requirements of the requisitioning department. Special consideration was given to contract proposals for large commitments and to cases involving profit incentives. Submissions to Treasury Board were prepared and liaison with Treasury Board staff was maintained.

The Branch reviewed reports prepared by the Audit Services Division of the Comptroller of the Treasury following the audit of contracts, and co-operated with that Division and the procurement branches of the Department to resolve cost and profit problems with contractors arising from such audits.

Studies were undertaken on price terms of contracts for technical and field service representatives, on the costing of travelling and living expenses and on overhead cost considerations for mobile repair parties. Investigations were carried out concerning prevention or recovery of apparent overpayments of cost reimbursable contracts and the renegotiation of fixed fee contracts where the actual or estimated expenditure is expected to fall outside the original estimate because of the volume of work to be performed. Consideration was also given to the financial features of production sharing arrangements.

Applications from defence contractors for capital assistance or additional capital cost allowance (accelerated depreciation) were reviewed in the light of departmental policy. Declarations being made to Crown Assets Disposal Corporation covering surplus capital assistance assets, tooling, and production material were also reviewed and approved. Rentals of Crown-owned assets currently on charge to contractors were assessed following an annual survey covering the use of these assets by contractors for other than defence work. Where contracts were cancelled or terminated because of revised requirements, negotiations were conducted with the contractors concerned to achieve a satisfactory settlement. Advice was given on the application of sales tax, duty drawbacks and insurance coverage to defence contracts.

The Branch co-ordinated the preparation of the Department's estimates requirements, including the appropriations required by Crown companies responsible to Parliament through the Minister of Defence Production. The annual capital and operating budget submissions required from these companies under The Financial Administration Act were reviewed, as were their interim financial statements. The Branch also administered grants made in lieu of taxes to municipalities in which Crown-owned defence plants operated by private contractors are situated.

The Legal Branch advised all other branches of the Department on various legal matters, including the terms of proposed contracts, termination of contracts and claims by and against the Crown. It gave legal intepretations of The Defence Production Act and of the terms of current contracts, gave legal opinions on a wide range of departmental matters, and prepared some of the Department's submissions to the Governor in Council and the Treasury Board. It also advised in regard to assignment of contracts, title, risk, insurance, subcontracting, bankruptcy, patents, inventions, royalties, sales taxes, customs duties, and land matters.

One of the Branch's principal services was the drafting of contracts with Canadian industry following negotiation of the contract terms by the Department. In this field it was necessary to give special attention to new shipbuilding contracts because the Department commenced procuring large vessels on a firm price basis. This manner of procurement required more complex legal drafting than the former cost reimbursement type contracts.

Another new type of formal contract was that covering the granting by the Crown to Canadian industry of financial assistance under departmental Votes for design and development work and for preproduction and tooling costs in the interests of the Canada-United States production sharing programme. In addition, the CF-104 aircraft programme continued to call for various ancillary contracts and license agreements. Other formal contracts drawn by the Legal Branch covered electronic equipment, research projects, military vehicles and various other defence supplies for Canada's Armed Services and for the United States military departments.

In connection with these contracts, solicitors of the Legal Branch in many cases advised the purchasing, production and technical officers of the Department during their negotiations with representatives of Canadian industry. It was also necessary for the solicitors of the Branch to confer with lawyers representing industry in settling the legal content of the contracts.

Considerable assistance to and cooperation with the Department of Justice was necessary in regard to litigation resulting from claims by or against the Department based on differences arising out of contracts between the Department and Canadian suppliers. In connection with the day-to-day purchase of general items by the district purchasing offices of the Department, the Branch commenced a review of the contract terms covering all types of supplies in order to simplify and standardize such terms.

The Legal Branch handled all the legal work of Canadian Commercial Corporation, a Crown company which reports to Parliament through the Minister of Defence Production.

The Secretary's Branch administered the Department's Communications, Printing and Stationery, Central Registry, and Service Divisions. The Secretary, as the Department's official signing officer, endorsed formal contracts with suppliers and conducted departmental correspondence.

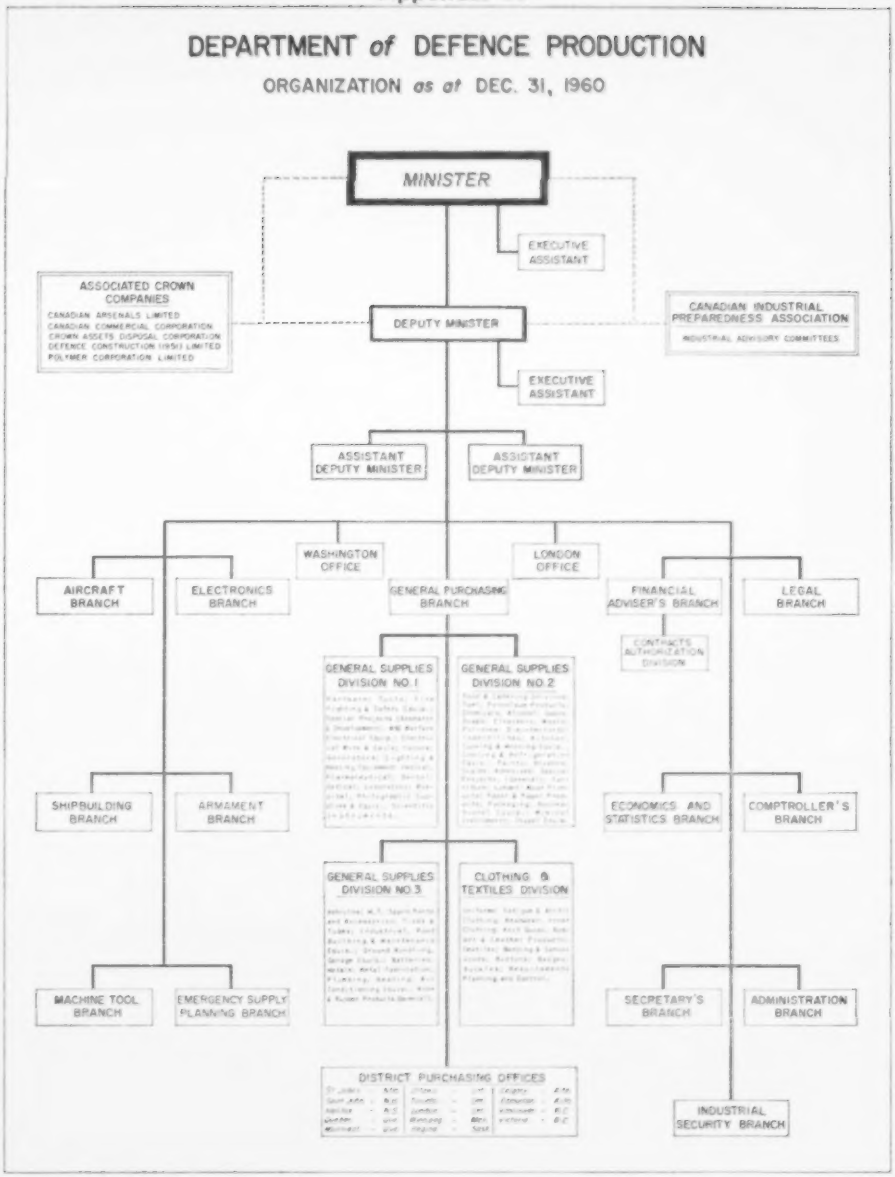
The Communications Division maintained a teletype service between Ottawa and the Department's offices in Montreal, Toronto and Washington. This service was available to other Government agencies on a pro rata basis and was extensively used by them. Approximately 100,000 telegraphic and teletype messages were cleared by the Division during the year. The "Telex" system, providing direct exchange of messages with other subscribers, was extended to cover all wire communications between the Department's headquarters in Ottawa and its Halifax office. Arrangements were completed during the year for the despatch of all departmental messages to Service installations in Canada through the Department of National Defence signal system.

The Central Registry was responsible for the creation of all needed files and for the control and protection of over 150,000 existing departmental files.

The Service Division continued to provide the procurement branches with lists of firms capable of producing required items; reproduced invitations to tender, contracts and amendments to contracts; distributed copies of these documents to appropriate recipients; received, guarded and opened all tenders received at Head Office; and was responsible for replying to inquiries regarding the award of contracts.

The Secretary's Branch supplied several continuing departmental committees with secretarial services and officers of the Branch represented the Department on various inter-departmental committees.

Appendix A


DEPARTMENT of DEFENCE PRODUCTION
ORGANIZATION as at DEC. 31, 1960
MINISTER
EXECUTIVE ASSISTANT
ASSOCIATED CROWN COMPANIES
CANADIAN ARSENALS LIMITED
CANADIAN COMMERCIAL CORPORATION
CROWN ASSETS DISPOSAL CORPORATION
DEFENCE CONSTRUCTION (1951) LIMITED
POLYMER CORPORATION LIMITED
DEPUTY MINISTER
CANADIAN INDUSTRIAL PREPAREDNESS ASSOCIATION
INDUSTRIAL ADVISORY COMMITTEES
EXECUTIVE ASSISTANT
ASSISTANT DEPUTY MINISTER
ASSISTANT DEPUTY MINISTER
WASHINGTON OFFICE
LONDON OFFICE
AIRCRAFT BRANCH
ELECTRONICS BRANCH
GENERAL PURCHASING BRANCH
FINANCIAL ADVISER'S BRANCH
LEGAL BRANCH
CONTRACTS AUTHORIZATION DIVISION
GENERAL SUPPLIES DIVISION NO. 1
GENERAL SUPPLIES DIVISION NO. 2
SHIPBUILDING BRANCH
ARMAMENT BRANCH
ECONOMICS AND STATISTICS BRANCH
COMPTROLLER'S BRANCH
GENERAL SUPPLIES DIVISION NO. 3
CLOTHING & TEXTILES DIVISION
MACHINE TOOL BRANCH
EMERGENCY SUPPLY PLANNING BRANCH
SECRETARY'S BRANCH
ADMINISTRATION BRANCH
DISTRICT PURCHASING OFFICES
INDUSTRIAL SECURITY BRANCH

Appendix B

Senior Personnel of the Department

as at December 31, 1960

Minister

The Honourable Raymond O'Hurley, P.C., M.P.

Executive Assistant to the Minister	Bernard E. Poirier

Deputy Minister

D. A. Golden

Assistant Deputy Minister	G. W. Hunter
Assistant Deputy Minister	W. H. Huck
A/Executive Assistant to the Deputy Minister	W. J. Mulock

Production Branches

Director, Aircraft Branch	D. L. Thompson
Deputy Director, Aircraft Branch	A. D. Belyea
Director, Armament Branch	C. L. Muir
Director, Electronics Branch	D. B. Mundy
Deputy Director, Electronics Branch	S. I. Comach
Deputy Director, Electronics Branch	T. C. Jones
Director, Machine Tool Branch	R. Mosher
Director, Shipbuilding Branch	J. C. Rutledge

General Purchasing Branch

Director	D. M. Erskine
Deputy Director	R. C. D. Laughton

Emergency Supply Planning Branch

Director	J. C. Morrison

Advisory and Service Branches

Financial Adviser	R. M. Keith
Deputy Financial Adviser	N. R. MacLean
Director, Contracts Authorization Division	J. D. C. Mahaffy
Comptroller	G. F. Wevill
Deputy Comptroller	T. E. Brown
Departmental Secretary	J. J. Tevlin
Director, Administration Branch	H. R. Kotlarsky
Director, Economics and Statistics Branch	W. J. W. V. Johnston
Director, Industrial Security Branch	L. C. Cragg
Director, Legal Branch	F. F. Waddell
Deputy Director, Legal Branch	C. S. Stevenson
Director, London (England) Office	R. D. Roe
Director, Washington Office	J. A. Teeter

Appendix C

Distribution of Departmental Staff

as at December 31, 1960

	Number of Employees
Minister's Office	12
Deputy Minister's Office	31
Aircraft Branch	162
Armament Branch[1]	59
Electronics Branch	187
Machine Tool Branch	27
Shipbuilding Branch	105
General Purchasing Branch—	
Head Office	184
District Purchasing Offices	171
Emergency Supply Planning Branch	19
Administration Branch	79
Comptroller's Branch	85
Economics and Statistics Branch	34
Financial Adviser's Branch	57
Legal Branch	11
Secretary's Branch	190
Industrial Security Branch	25
Offices in the United States and Europe, and NATO Delegation, Paris	75
Total	1,513

[1] Formerly the Ammunition and Gun Branches.

Appendix D

Crown Companies Associated with the Department of Defence Production

as at December 31, 1960

Canadian Arsenals Limited

President	Major-General J. H. MacQueen
Vice-President	N. P. Petersen
General Manager	J. H. Berry
Secretary-Treasurer	D. C. Cullen

Canadian Commercial Corporation

President	M. H. Lamoureux
Secretary and Legal Adviser	F. F. Waddell
Comptroller	G. F. Wevill

Crown Assets Disposal Corporation

President and General Manager	Louis Richard
A/Secretary and Legal Adviser	M. J. Ellsworth

Defence Construction (1951) Limited

President and General Manager	R. G. Johnson
Secretary	J. D. Jennison
Treasurer	N. Tokaryk

Polymer Corporation Limited

Chairman of the Board	E. J. Brunning
President and Managing Director	E. R. Rowzee
Vice-President, Operations	L. D. Dougan
Vice-President, Finance	S. Wilk
Vice-President, Marketing	Roger E. Hatch
Vice-President, Research and Development	E. J. Buckler
Secretary and Chief Legal Officer	W. J. Dyke

Appendix E

District Purchasing Offices
and
Offices Located Outside Canada

Addresses as at December 31, 1960

District Purchasing Offices

ST. JOHN'S, NFLD.	Buckmaster's Field, Building No. 40 (P.O. Box 487)
HALIFAX, N.S.	Room 527, Federal Building, Bedford Row (P.O. Box 1655)
SAINT JOHN, N.B.	Room 408, Sadim Building, Canterbury & Duke Streets
QUEBEC, P.Q.	126 St. Peter Street, (P.O. Box 70—Station "B")
MONTREAL, P.Q.	1441 St. Urbain Street
OTTAWA, ONT.	953 Somerset Street, West
TORONTO, ONT.	Mackenzie Building, 36 Adelaide Street, East
LONDON, ONT.	388 Dundas Street
WINNIPEG, MAN.	Room 404, C.P.R. Building, 208 Portage Avenue
REGINA, SASK.	302, New Post Office Building
CALGARY, ALTA.	Room 725, Public Building
EDMONTON, ALTA.	906 Federal Public Building, 99th Ave. & 107 Street
VANCOUVER, B.C.	Room 407, Federal Building, 325 Granville Street
VICTORIA, B.C.	Room 318, Customs Building, Government Street

Offices Located Outside Canada

WASHINGTON, U.S.A.	Canadian Department of Defence Production, 2450 Massachussetts Ave., (P.O. Box 4897, Cleveland Park Station) WASHINGTON 8, D.C., U.S.A.
Sub-Office	MCL DDP Wright-Patterson Air Force Base, OHIO, U.S.A.
PRODUCTION SHARING LIAISON OFFICES[1]	Canadian Department of Defence Production, c/o Canadian Consulate General, 680 Fifth Ave., NEW YORK 19, N.Y., U.S.A.

[1] A production sharing liaison office was opened in Detroit, Michigan, in January 1961 at the following address:

Canadian Department of Defence Production,
1580 East Grand Blvd.,
Detroit, Mich., U.S.A.

	ROP/DDP, Rome Air Materiel Area, Griffiss Air Force Base, ROME, N.Y., U.S.A.
	Canadian Department of Defence Production, Los Angeles Air Procurement District, 1206 South Maple Avenue, LOS ANGELES 15, Calif., U.S.A.
	Canadian Department of Defence Production, AMC/ESC/LEX L. G. Hanscom Field, BEDFORD, Mass., U.S.A.
LONDON, ENGLAND[2]	Department of Defence Production (Canada), Sackville House, 40 Piccadilly, LONDON W. 1, England
Sub-Offices	c/o Canadian Embassy, 35 avenue Montaigne, PARIS 8, France
	Viktoriastrasse 38, KOBLENZ, Federal Republic of Germany
	c/o Scottish Aviation Limited, Prestwick Airport, AYRSHIRE, Scotland
OFFICE OF DDP REPRESENTATIVE TO THE NORTH ATLANTIC COUNCIL	OTAN-NATO, Place du Marechal de Lattre de Tassigny, PARIS XVI[e], France
OFFICE OF CANADIAN REPRESENTATIVE TO THE EUROPEAN ORGANIZATION FOR DIRECTION AND CONTROL F-104G	c/o Canadian Embassy, Zitelmannstrasse 22, BONN, Federal Republic of Germany

[2] Effective March 28, 1961, the address of the London (England) Office will be:
Department of Defence Production (Canada),
No. 1 Grosvenor Square,
London, W. 1, England.

Appendix F

Statistics of Defence Contracts and Expenditures

The statistical tables in this appendix illustrate, in terms of the net value of contracts placed and the value of expenditures, the magnitude of various sectors of the Canadian defence procurement and construction programme during the calendar years 1958, 1959 and 1960.

The tables are grouped in pairs, with the first "a" containing data on the net value of contracts placed and the second "b" containing the value of expenditures against these contracts and against similar contracts placed in earlier years.

Tables 1-a and 1-b to Tables 4-a and 4-b contain statistics related to defence procurement by the Department of Defence Production and Defence Construction (1951) Limited for the Department of National Defence. Payments for this procurement are made from funds appropriated by Parliament for the Department of National Defence.

Tables 5-a and 5-b relate to certain activities in support of defence production activity that are paid for from Defence Production Parliamentary votes.

Tables 6-a and 6-b provide data relating to prime defence contracts placed in Canada by the United States Government through Canadian Government agencies such as Canadian Commercial Corporation. The Department of Defence Production places most of the contracts for Canadian Commercial Corporation.

The net value of contracts placed, as shown in these tables, includes the value of amendments which increased or decreased commitments under existing contracts, as well as the value of new contracts. In some cases, therefore, credit net values have resulted as decreasing amendments to contracts placed in earlier periods have exceeded the value of new contracts and increasing amendments issued.

The totals at the bottom of the columns do not always equal the sum of the programme values shown because of rounding the figures to the nearest thousand dollars.

Definitions of the Defence Programmes

The general concept involved in this defence programme classification is that of relating all procurement, as far as possible, to a readily identifiable military end-item, such as an aircraft, a ship, an electronic device, a gun, a type of ammunition, an item of clothing, etc. Thus a particular programme includes, in addition to the end-item, those components or parts that become an integral part of the end-item, as well as associated services such as design and development, installation, maintenance, and repair and overhaul.

Aircraft: This programme includes complete aircraft and items to be physically incorporated in complete aircraft, such as airframes, engines, propellers, electrical systems and their components. Government-furnished aircraft equipment and the repair and overhaul of aircraft are also included. Guided missiles are included in this programme. Excluded are accessories such as armament and communication equipment, navigational and flight instruments, photographic equipment, training devices and ground equipment.

Ships: This programme includes escort vessels, minesweepers, aircraft carriers, and other floating equipment, and ship components such as hulls and superstructures, propulsion machinery, boilers, condensers, heating and electrical systems. Reconversion, refit and repair of ships are also included. Armament and electronic gear are excluded.

Tank-automotive: Included in this programme are tanks and vehicles of both armoured and non-armoured types. Cars, trucks, and buses and their components, such as tires and tubes, are included. Excluded are armament and electronic equipment.

Weapons: The weapons programme includes small arms, guns, howitzers, and rocket launchers and their components. It excludes electronic fire controls.

Ammunition and Explosives: This programme comprises light, medium, and heavy ammunition of all types, including mines, depth charges, rockets, and torpedoes. Explosives and certain defence chemicals are also included in this programme.

Electronics and Communication Equipment: Electronics and communication equipment of all types are in this programme, including telephone, telegraph, radio and radar equipment. Underwater sound equipment and fire control equipment are also included. Development, maintenance, management and transportation services associated with the procurement of electronics and communication equipment are in this programme.

Fuels and Lubricants: This programme includes petroleum, gas, coal and coke, and their products.

Clothing and Equipage: All items of personal clothing, including footwear, and of personal equipment, such as mess kits and steel helmets, are in this programme.

Construction: This programme includes all construction contracts for building structures, runways, etc., as well as for consultant services, repairs and maintenance. Most of these contracts are placed by Defence Construction (1951) Limited.

All Contracts and Expenditures

Table 1-a.—Net Value of Total Canadian Government Defence Contracts Placed by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1958	1959	1960
	$000	$000	$000
Aircraft	300,258	202,632	343,919
Ships	77,140	25,989	86,243
Tank-automotive	10,674	7,893	6,947
Weapons	10,570	7,651	6,099
Ammunition and explosives	21,298	11,398	13,604
Electronics and communication equipment	73,409	82,300	133,617
Fuels and lubricants	53,907	57,768	50,496
Clothing and equipage	6,124	18,808	6,284
Construction	66,956	67,141	51,571
Other	110,316	109,976	107,091
Total	730,650	591,556	805,871

Table 1-b.—Value of Expenditures on Canadian Government Defence Contracts Placed by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1958	1959	1960
	$000	$000	$000
Aircraft	341,022	245,893	251,933
Ships	49,937	35,056	31,203
Tank-automotive	11,883	7,574	8,572
Weapons	18,153	12,963	9,436
Ammunition and explosives	24,857	32,930	16,599
Electronics and communication equipment	99,469	99,986	87,894
Fuels and lubricants	46,512	40,444	39,007
Clothing and equipage	7,088	20,639	4,123
Construction	48,516	67,723	64,193
Other	110,289	110,234	107,633
Total	757,727	673,441	620,592

Contracts and Expenditures in Canada

Table 2-a.—Net Value of Canadian Government Defence Contracts Placed in Canada by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1958	1959	1960
	$000	$000	$000
Aircraft	307,049	170,609	307,293
Ships	75,306	25,337	85,304
Tank-automotive	9,521	7,912	7,198
Weapons	9,173	3,061	3,810
Ammunition and explosives	20,544	9,974	10,175
Electronics and communication equipment	58,296	80,373	99,301
Fuels and lubricants	53,499	57,453	50,205
Clothing and equipage	6,024	19,229	6,227
Construction	66,017	66,298	50,666
Other	105,710	103,814	100,437
Total	711,139	544,059	720,616

Table 2-b.—Value of Expenditures on Canadian Government Defence Contracts Placed in Canada by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1958	1959	1960
	$000	$000	$000
Aircraft	324,645	230,288	210,958
Ships	48,431	34,089	29,632
Tank-automotive	9,554	6,946	7,829
Weapons	12,722	10,381	5,421
Ammunition and explosives	23,934	30,797	15,753
Electronics and communication equipment	73,749	83,264	73,307
Fuels and lubricants	46,139	40,208	38,759
Clothing and equipage	6,999	20,562	4,082
Construction	46,871	66,277	63,374
Other	105,520	105,191	101,193
Total	698,565	628,004	550,309

Contracts and Expenditures in the United States

Table 3-a.—Net Value of Canadian Government Defence Contracts Placed in the United States by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1958	1959	1960
	$000	$000	$000
Aircraft	8,717 cr	25,873	31,415
Weapons	1,648	68 cr	950
Ammunition and explosives	482	1,181	497
Electronics and communication equipment	12,864	294	34,023
Other	3,769	2,967	3,532
Total	10,046	30,247	70,417

Table 3-b.—Value of Expenditures on Canadian Government Defence Contracts Placed in the United States by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1958	1959	1960
	$000	$000	$000
Aircraft	12,331	10,212	36,729
Weapons	1,644	633	2,280
Ammunition and explosives	560	1,977	739
Electronics and communication equipment	24,830	14,734	13,472
Other	2,340	3,716	5,497
Total	41,705	31,272	58,717

Contracts and Expenditures in the United Kingdom

Table 4-a.—Net Value of Canadian Government Defence Contracts Placed in the United Kingdom by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1958	1959	1960
	$000	$000	$000
Aircraft	1,921	6,130	5,166
Ships	147	172	590
Tank-automotive	1,091	130	467
Weapons	303 cr	4,611	1,322
Ammunition and explosives	237	217	2,902
Electronics and communication equipment	2,143	1,514	156
Other	857	1,646	1,084
Total	6,093	14,420	11,688

Table 4-b.—Value of Expenditures on Canadian Government Defence Contracts Placed in the United Kingdom by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1958	1959	1960
	$000	$000	$000
Aircraft	4,041	5,002	4,235
Ships	1,314	187	232
Tank-automotive	2,026	416	436
Weapons	3,481	1,901	1,720
Ammunition and explosives	329	131	76
Electronics and communication equipment	784	1,870	982
Other	1,182	1,298	908
Total	13,157	10,805	8,589

Contracts and Expenditures in Support of Defence Production Activity

Table 5-a.—Net Value of Contracts Placed by the Department of Defence Production for Care, Maintenance and Custody, Establishment of Production Capacity, Source Establishment for Components, and Sustaining Technological Capability, and Value of Approvals for Capital Assistance

Category	1959	1960
	$000	$000
Care, maintenance and custody of Crown-owned standby defence assets	162	1,030
Capital assistance approvals	2,416	248
Establishment of competitive production capacity through absorbing certain preproduction and tooling costs	856	307
Establishment of qualified sources for the production of component parts and materials	356	512
To sustain research and development capability in Canadian industry in order to assist the Canada-United States development and production sharing programme	.....	2,425
Total	3,790	4,522

Table 5-b.—Value of Expenditures by the Department of Defence Production for Care, Maintenance and Custody, Capital Assistance, Establishment of Production Capacity, Source Establishment for Components, and Sustaining Technological Capability

Category	1959	1960
	$000	$000
Care, maintenance and custody of Crown-owned standby defence assets	216	570
Capital assistance	695	1,456
Establishment of competitive production capacity through absorbing certain preproduction and tooling costs	454	630
Establishment of qualified sources for the production of component parts and materials	171	268
To sustain research and development capability in Canadian industry in order to assist the Canada-United States development and production sharing programme	.....	2,033
Total	1,536	4,956

United States Contracts and Expenditures in Canada

Table 6-a.—Net Value of United States Government Defence Contracts Placed in Canada through the Canadian Commercial Corporation and Defence Construction (1951) Limited

Programme	1958	1959	1960
	$000	$000	$000
Aircraft	26,990	20,494	42,680
Ammunition and explosives	757	1,141	871
Electronics and communication equipment	12,756	35,804	14,752
Construction	25,631	12,025	9,995
Other	2,045	5,771	7,061
Total	68,180	75,234	75,359

Table 6-b.—Value of Expenditures by the United States Government on Defence Contracts Placed in Canada through the Canadian Commercial Corporation and Defence Construction (1951) Limited

Programme	1958	1959	1960
	$000	$000	$000
Aircraft	37,005	27,476	25,588
Ammunition and explosives	1,742	1,870	314
Electronics and communication equipment	13,025	19,491	38,238
Construction	3,256	22,387	17,310
Other	2,738	2,042	4,075
Total	57,766	73,265	85,525

Appendix G

Report to the Minister on the Audit of the Accounts of the Department

for the year ended March 31, 1960

OTTAWA, October 25, 1960.

The Honourable Raymond O'Hurley,
Minister of Defence Production,
Ottawa, Canada.

SIR,

An examination having been made of the accounts maintained and the financial statements prepared by the Department of Defence Production for the year ended March 31, 1960, I now report that in my opinion,

(*a*) proper books of account have been kept by the Department;

(*b*) the financial statements of the Department

(i) were prepared on a basis consistent with that of the preceding year and are in agreement with the books of account;

(ii) in the case of the Balance Sheet, give a true and fair view of the state of the Department's affairs as at the end of the financial year;

(iii) in the cases of the Summary of Transactions in Equity Account (with supporting statements of Expenditure and Receipts) and the Summary of Transactions in Reserve Arising from Trading Operations, give a true and fair view of the operations of the Department for the financial year; and

(*c*) the transactions of the Department that have come under my notice have been within the powers of the Department under The Defence Production Act and any other Act applicable to the Department.

In accordance with established governmental practice, the Crown-owned capital assets for which the Department is accountable are carried on the Balance Sheet at cost, without showing any deduction with respect to depreciation.

Yours faithfully,

A. M. HENDERSON,
Auditor General.

Balance Sheet as at March 31, 1960

GENERAL ACCOUNT

ASSETS			LIABILITIES AND GOVERNMENT EQUITY	
Cash		$ 175,659	Accounts payable	$ 38,896
Accounts receivable—			Sundry liabilities and deferred revenue	167,313
Sale of Crown plants and equipment	$15,981,921		Equity of Government of Canada, Schedule 1	233,648,080
Renegotiation of contracts, World War II	35,677			
		16,017,598		
Advances—				
Crown agencies	13,500,000			
Other	7,572			
		13,507,572		
Investments, at cost—				
Polymer Corporation Limited, capital stock	30,000,000			
Township of Toronto, 3% debentures 1960-71	309,400			
Defence Construction (1951) Limited, capital stock	30			
Canadian Arsenals Limited, capital stock	28			
		30,309,458		
Crown-owned lands, buildings, machinery and equipment, at cost—				
With contractors, including rehabilitation and installation costs	46,490,967			
In warehouse	4,019,057			
Advances and progress payments	7,750,786			
		58,260,810		
Crown-owned plants, at cost		12,510,430		
Canadian Arsenals Limited plants, at cost		103,072,762		
		$233,854,289		$233,854,289

REVOLVING FUND

Accounts receivable			$ 2,883,585	Accounts payable		$ 1,189,358
Progress payments to suppliers			1,564,487	Progress payments from customers		1,905,241
Working capital advances—				Equity of Government of Canada—		
Canadian Arsenals Limited			7,500,000	Revolving Fund account, as provided by Defence Production Act, section 16 (authorized $100,000,000), net expenditure	$20,666,596	
Inventories—				Inventory taken over by Department at inception	3,728,584	
Strategic materials, at cost		$15,707,243		Reserve arising from trading operations, Schedule 2	238,781	
Cloth, at cost or less—						24,633,961
Balance April 1, 1959	$553,051					
Purchases	142,739					
	695,790					
Less: Cost of sales	509,738					
	186,052					
Deduct: Material transferred to Department of National Defence	112,807					
		73,245				
			15,780,488			
			$27,728,560			$27,728,560

In addition to the assets listed above, the Department has recorded in its books expenditure in the amount of $244,542,241 for production tooling, dies and jigs, title to which is vested in the Crown.

Approved on behalf of the Department.

D. A. GOLDEN,
Deputy Minister.

G. F. WEVILL,
Comptroller.

Certified in accordance with my report dated October 25, 1960, to the Minister of Defence Production.

A. M. HENDERSON,
Auditor General.

Schedule 1

Summary of Transactions in Equity of Government of Canada Account

for the year ended March 31, 1960

Balance brought forward April 1, 1959		$235,390,060	
Additions:			
Funds made available by means of appropriation and by statute	$17,602,407		
Less: expenditure as per Schedule 1(a)	16,734,882		
Net equity acquired from appropriation		867,525	
Increase in working capital advance to the Canadian Commercial Corporation		2,000,000	
Transfer of assets from other departments and Crown agencies		1,526,220	
Capitalization of machinery and equipment previously charged as tooling expense, net		753,244	
			$240,537,049
Reductions:			
Receipts from sales, etc., Schedule 1(b)		3,179,433	
Transfer of surplus assets to Crown Assets Disposal Corporation		1,392,549	
Depreciation and other allowances on sales of buildings and equipment		1,057,397	
Transfer of assets to other departments and Crown agencies		593,846	
Decrease in fixed assets in custody of Canadian Arsenals Ltd., as shown by the balance sheet of the company at March 31, 1960		350,706	
Assets written off due to termination of contracts, dismantling, etc.		202,376	
Rehabilitation and other expenses on machines no longer on record with the Department		112,662	
			6,888,969
Balance at March 31, 1960			$233,648,080

Schedule 1 (a)

Statement of Expenditure

for the year ended March 31, 1960

Vote			
68 and 502	Departmental administration		
	Salaries	$ 6,453,539	
	Living allowances	98,751	
	Travelling expenses	234,544	
	Office stationery, supplies and equipment	216,249	
	Telephones and telegrams	162,040	
	Professional and special services	69,886	
	Postage	54,574	
	Freight, express and cartage	12,788	
	Purchase and production services by Crown agencies	4,564	
	Rental of office accommodation	1,347	
	Publication of departmental reports and other material	1,127	
	Sundries	11,398	
			$ 7,320,807
69	Care, maintenance and custody of standby defence plants, buildings, machine tools and production tooling		343,267
70	Capital assistance		
	Capital account—		
	Construction, improvements and acquisition of land	851,774	
	Equipment	43,738	
	Income account—		
	Equipment for Crown agencies	4,620	
	Establishment of production capacity	843,531	
		1,743,663	
	Less: charges to capital account	895,512	
	Establishment of production capacity, etc.		848,151
71 and 643	Grants to municipalities in lieu of taxes		105,020

72 and 503	Establishment of qualified sources for production of component parts and materials		296,097
504	Sustainment of technological capability in Canadian industry		1,851,107
73	Defence Construction (1951) Limited—Administration		3,051,307
	Canadian Arsenals Limited—		
74	Administration and operation		$ 2,000,000
75	Construction and improvements	$ 239,045	
	Equipment	662,766	
			901,811
Statutory			
	Minister of Defence Production—		
	Salary	15,000	
	Motor car allowance	2,000	
			17,000
	Refund of prior years' proceeds from sale of surplus assets		315
	Total expenditure, per Schedule 1		$16,734,882

Schedule 1 (b)

Statement of Receipts

for the year ended March 31, 1960

Receipts on Income Account—		
Sales of surplus Crown assets	$ 7,422,243	
Return on investments	4,256,460	
Rentals of buildings and equipment	209,775	
Refund of previous years' expenditure	12,560	
Miscellaneous	73,215	
		$11,974,253
Receipts on Capital Account, per Schedule 1—		
Sale of plant and equipment by the Department	3,117,301	
Repayment of debentures	21,166	
Recoveries of advances and accounts receivable	40,966	
		3,179,433
		$15,153,686

Schedule 2

Summary of Transactions in Reserve Arising from Trading Operations, Revolving Fund

for the year ended March 31, 1960

Balance brought forward April 1, 1959		$ 378,131
Additions:		
Sales, less cost of materials sold—		
Cloth, Sales	$ 591,846	
Cloth, Cost of Sales	509,738	
		82,108
Strategic materials, Sales	54,160	
Strategic materials, Cost of Sales	54,160	
		.....
Shipbuilding components, Sales	3,093,871	
Shipbuilding components, Cost of Sales	3,093,871	
		.....
Aircraft components, Sales	42,079	
Aircraft components, Cost of Sales	42,079	
		.....
Ordnance, Munitions, etc., Sales	4,767,859	
Ordnance, Munitions, etc., Cost of Sales	4,767,859	
		.....
		460,239
Reductions:		
Warehousing and other expenses—cloth		
Salaries and wages	113,499	
Rent	79,978	
Sundries	6,527	
	200,004	
Warehousing expenses—strategic materials	5,394	
Adjustment of receivables with concurrence of Department of Justice	16,060	
		221,458
Balance at March 31, 1960		$ 238,781